

HW 12
Honors Physics

1. Two charges are stationary in space, and the first has a value of 3.5 C and the second has a value of 5.0 C . If the distance separating them is 6 m , what is the force they exert on each other?
2. Two charges are stationary in space, and the first has a value of $-70\text{ }\mu\text{C}$ and the second has a value of $82\text{ }\mu\text{C}$. If the distance separating them is 38 cm , what is the force they exert on each other?
3. Three charges are placed on a line. The farthest left charge has a value of $8.4\text{ }\mu\text{C}$, the middle charge has a value of $-5.5\text{ }\mu\text{C}$, and the farthest right charge has a value of $-9.8\text{ }\mu\text{C}$. The farthest left and middle charges are separated by 4 cm , and the farthest right and middle charges are separated by 6 cm . What is the net force acting on the middle charge?
4. Two charges are stationary in space, and the first has a value of 3.5 C and the second has a value of 5.0 C . If the distance separating them is 6 m , what is the electric field that exists at a point halfway between the charges?
5. Two charges are stationary in space, and the first has a value of $-70\text{ }\mu\text{C}$ and the second has a value of $82\text{ }\mu\text{C}$. If the distance separating them is 38 cm , what is the electric field that exists at a point halfway between the charges?
6. Three charges are placed on a line. The farthest left charge has a value of $8.4\text{ }\mu\text{C}$, the middle charge has a value of $-5.5\text{ }\mu\text{C}$, and the farthest right charge has a value of $-9.8\text{ }\mu\text{C}$. The farthest left and middle charges are separated by 4 cm , and the farthest right and middle charges are separated by 6 cm . What is the electric field that exists at the point of the middle charge?